

A PARTIALLY EMBEDDED DATABASE AND AN  
EMBEDDED DATABASE MANAGER FOR A CONTROL SYSTEM

ABSTRACT OF THE DISCLOSURE

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3 A data storage system includes a database that is configured as  
4 a static data file containing static data and a dynamic data file containing  
5 dynamic data. The static data file is stored in a static memory device and the  
6 dynamic data file is stored in a dynamic memory device. A catalog included in  
7 the database defines whether the data is static or dynamic and further defines  
8 an arrangement of a set of data fields and data records included in the  
9 database. A database manager uses a file system to access the files in a  
10 rapid manner using an address pointer and, because the data is stored in  
11 files, the data may be accessed remotely without need for additional  
12 communication strategies/protocol. To enable editing of the static data, the  
13 database manager creates a mirror image of the static data in the dynamic  
14 memory where editing may occur. The mirror image of data having the edited  
15 data is later returned to the flash memory. A database generation tool  
16 ensures that Boolean data elements are efficiently stored in the database by  
17 causing all of the Boolean elements to be collectively stored in one or more  
18 data fields.

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